

CLAIMS

What is claimed is:

1. A power distribution apparatus comprising:
an energy management system;
a first battery inlet connected to said energy management system and adapted to detachably connect a primary battery to said energy management system;
a second battery inlet connected to said energy management system and adapted to detachably connect a secondary battery to said energy management system; and
a plurality of outlets connected to said energy management system, each of said outlets adapted for detachably connecting to a device requiring power.
2. The apparatus of claim 1 wherein said energy management system comprises a power source selector for selecting a power source for providing power for a device connected to one of said outlets.
3. The apparatus of claim 1 wherein said energy management system comprises a charging source selector for selecting a charging source for recharging a secondary battery connected to one of said battery inlets.
4. The apparatus of claim 1 wherein said energy management system further comprises a charge controller for controlling the magnitude of a charge current to recharge a secondary battery connected to one of said battery inlets.
5. The apparatus of claim 1 wherein said energy management system further comprises a measuring device for measuring remaining capacity in a battery connected to at least one of said inlets.
6. The apparatus of claim 5 further comprising an indicator connected to said energy management system for conveying the measured remaining capacity.

7. The apparatus of claim 5 further comprising a bus connected to said energy management system for relaying the measured remaining capacity to a battery connected to one of said battery inlets.

8. The apparatus of claim 1 wherein said first battery inlet is adapted to detachably connect a secondary battery when a primary battery is not attached.

9. The apparatus of claim 1 wherein said second battery inlet is adapted to detachably connect a primary battery when a secondary battery is not attached.

10. The apparatus of claim 1 further comprising an external power source inlet.

11. A power source system comprising:

an energy management system;

a first battery inlet connected to said energy management system and adapted to detachably connect a primary battery to said energy management system;

a second battery inlet connected to said energy management system and adapted to detachably connect a secondary battery to said energy management system; and

a plurality of outlets connected to said energy management system, each of said outlets adapted for detachably connecting to a device requiring power;

a first battery detachably connected to said first inlet; and

a second battery detachably connected to said second inlet.

12. The power source system of claim 11 wherein said first battery is a primary battery and wherein said second battery is a secondary battery.

13. The power source system of claim 11 wherein at least one of said first and second batteries is a fuel cell.

14. The power source system of claim 11 wherein said power source system comprises no fuel cells.

15. The power source system of claim 11 further comprising an external power source inlet.

16. A power source system comprising:

an energy management system;

a primary battery connected to said energy management system;

a secondary battery connected to said energy management system; and

a plurality of outlets connected to said energy management system, each of said outlets adapted for detachably connecting to a device requiring power;

wherein said energy management system comprises:

a power source selector for selecting a power source for providing power for a device connected to one of said outlets;

a charging source selector for selecting a charging source for recharging said secondary battery;

a charge controller for controlling the magnitude of a charge current to recharge said secondary battery; and

a measuring device for measuring remaining capacity in at least one of said batteries.

17. The power source system of claim 16 further comprising an indicator connected to said energy management system for conveying the measured remaining capacity.

18. The power source system of claim 16 further comprising a bus connected to said energy management system for relaying the measured remaining capacity to at least one of said batteries.

19. The power source system of claim 16 wherein said primary battery is detachably connected to said energy management system.

20. The power source system of claim 16 wherein said primary battery comprises replaceable cells.

21. The power source system of claim 16 further comprising an external power source inlet.

22. A kit comprising:

power distribution apparatus with:

an energy management system;

a first battery inlet connected to said energy management system and adapted to

detachably connect a primary battery to said energy management system;

a second battery inlet connected to said energy management system and adapted

to detachably connect a secondary battery to said energy management system; and

a plurality of outlets connected to said energy management system, each of said outlets adapted to detachably connect a device requiring power;

a first battery for detachably connecting to said energy management system via said first inlet;

a second battery for detachably connecting to said energy management system via said second inlet; and

a device for detachably connecting to at least one of said outlets.

23. The kit of claim 22 wherein said first battery is a primary battery and wherein said second battery is a secondary battery.

24. The kit of claim 22 wherein said device comprises an electrically-powered device.

25. The kit of claim 22 wherein said power distribution apparatus further comprises an external power source inlet.

26. A method for powering a plurality of devices comprising:
providing a power distribution apparatus having a plurality of inlets and a plurality of outlets;
detachably attaching a first battery to a first inlet of said power distribution apparatus;
detachably attaching a second battery to a second inlet of said power distribution apparatus;
detachably attaching one or more electrical devices to one or more outlets of said power distribution apparatus;
selecting the first battery or the second battery; and
providing power from the selected battery to operate at least one of the electrical devices.

27. The method of claim 26 further comprising charging the second battery.

28. The method of claim 26 wherein charging the second battery includes charging the second battery with current from the first battery.

29. A method for operating a power distribution apparatus having a plurality of inlets and a plurality of outlets, comprising:
connecting a non-battery power source to a first inlet;
connecting a first battery to a second inlet;
connecting a second battery to a third inlet;
connecting one or more electrical devices to one or more outlets;
selecting a power source from the non-battery power source, the first battery, and the second battery;
selecting at least one electrical device; and
providing power from the selected power source to operate the selected at least one electrical device.

30. The method of claim 29 further comprising selecting a charging source from the non-battery power source and the first battery for charging the second battery, and charging the second battery with the selected charging source.